United States Patent [19] Urist			[11]	Patent 1	Number:	4,596,574	
			[45]	Date of	Patent:	Jun. 24, 1986	
[54]	BIODEGRADABLE POROUS CERAMIC DELIVERY SYSTEM FOR BONE MORPHOGENETIC PROTEIN		4,472,840 9/1984 Jefferies				
[75]		Marshall R. Urist, Pacific Palisade, Calif.	58-12	649 1/1983	Japan		
[73]		The Regents of the University of California, Berkeley, Calif.	OTHER PUBLICATIONS				
[21] [22]	Appl. No.:		Hench, L. L. et al., J. Biomedical Mater. Res. Symposium No. 4, pp. 25-42, "Direct Chemical Bond of Bioactive Glass-Ceramic Materials to Bone and Muscle," (1973).				
[51]	C07G 7/00			Primary Examiner—Ronald W. Griffin Attorney, Agent, or Firm—Kenyon & Kenyon			
[52]	424/14; 424/95			A	ABSTRACT		
[58] <b>Field of Search</b>			Disclosed is a biodegradable porous ceramic delivery system useful for delivery of bone morphogenic protein				
[56]		References Cited	(BMP) to viable tissue and to induce formation of new bone therein. The delivery composite is substantially				
U.S. PATENT DOCUMENTS			pure BMP in combination with a biodegradable porous				
4	3,922,155 11/19' 3,981,736 9/19' 4,294,753 10/19' 4,322,398 3/19' 4,347,234 8/19' 4,365,356 12/19'	32 Broemer et al 3/1.912	ceramic (sintered), e.g. beta-tricalcium phosphate, and may be prepared by admixing the BMP with the porous ceramic material. The composition is implanted in viable tissue where the BMP is slowly released and induces formation of new bone.				
4	1,455,256 6/198	34 Urist 260/112 R		25 Clai	ims, No Drav	vings	